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### INTERNATIONAL SEARCH REPORT

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|--|---|--|---|---|--|--|
| A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C23C 14/02, 14/56   |   |  |   |   |  |  |
| US CL: 427/535, 250 According to International Patent Classification (IPC) or to both national classification and IPC  |   |  |   |   |  |  |
| B. FIELDS SEARCHED   |   |  |   |   |  |  |
|  | cumentation searched (classification system followed b<br>27/535, 250                                       | by classification s                                | symbols)  |   |  |  |
| Documentation  | on searched other than minimum documentation to the   | extent that such                                   | documents are included in   | the fields searched $i$                                 |  |  |
| Electronic da<br>EAST  | ta base consulted during the international search (nam  | e of data base an                                  | d, where practicable, sear  | ch terms used)  |  |  |
| C. DOC   | UMENTS CONSIDERED TO BE RELEVANT  |  |   |   |  |  |
| Category *   | Citation of document, with indication, where a  | ppropriate, of the                                 | e relevant passages   | Relevant to claim No.                                   |  |  |
| X  | US 5.981.079 A (MOUNT, III et al.) 09 November 1999 (09.11.1999), col. 5, lines 15-22,                      |  |   | 1-4, 6-8  |  |  |
| Y  | col. 5, line 63 to col. 6, line 4,col. 6, lines 50-55, and col. 7, lines 1-5.                               |  |   | 41-44, 47, 48   |  |  |
| Υ,   | US 6,110,599 A (EDWARDS et al.) 29 August 2000 (29.08.2000), col. 1, lnes 25-35.                            |  |   | 41-44, 47, 48   |  |  |
| Y  | US 5,882,747 A (BRIA et al.) 16 March 1999 (16.03.1999), col. 1, lines 7-15 and 28-42, col. 2, lines 23-28. |  | lines 7-15 and 28-42,   | 6, 10, 46, 49   |  |  |
| Y  | US 3,916,048 A (WALLES) 28 October 1975 (28.10.1975), col. 2, lines 654-68.                                 |  |   | 5, 45   |  |  |
|  |   |  |   |   |  |  |
| Further  | r documents are listed in the continuation of Box C.  | See p  | patent family annex.  |   |  |  |
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| "A" document defining the general state of the art which is not considered to be of particular relevance   |   | "X" docur  | ment of particular relevance; the dered novel or cannot be consider   | claimed invention cannot be                             |  |  |
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|  | referring to an oral disclosure, use, exhibition or other means   |  | obvious to a person skilled in th   | J   |  |  |
| priority d   | t published prior to the international filing date but later than the ate claimed                           |  | ment member of the same patent  |   |  |  |
| Date of the actual completion of the international search  |   | Date of mailing of the international search report |   |   |  |  |
|  | 2004 (23.02.2004)   | Authorized officer                                 |   |   |  |  |
|  | ailing address of the ISA/US  |  | 11/11/  | 111   |  |  |
| Cor  | nmissioner for Patents  | Timothy H. Meeks must Walk T                       |   |   |  |  |
|  | ). Box 1450<br>xandria, Virginia 22313-1450   | Telephone No. (703) 308-0661                       |   |   |  |  |
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| Form PCT/ISA   | A/210 (second sheet) (July 1998)  |  |   |   |  |  |

## INTERNATIONAL SEARCH REPORT

| International application No. |  |
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| PCT/US03/25582                |  |

| Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)   |   |  |  |  |  |
|---|---|--|--|--|--|
| This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:   |   |  |  |  |  |
| 1. Claim Nos.:  because they relate to subject matter not required to be searched by this Auth  | hority, namely:   |  |  |  |  |
| 2. Claim Nos.:  because they relate to parts of the international application that do not compl an extent that no meaningful international search can be carried out, specific  | ly with the prescribed requirements to such cally:                                    |  |  |  |  |
| 3. Claim Nos.: 11-40, 51-80 because they are dependent claims and are not drafted in accordance with th   | e second and third sentences of Rule 6.4(a).  |  |  |  |  |
| Box II Observations where unity of invention is lacking (Continuation of Ite  | em 2 of first sheet)  |  |  |  |  |
| This International Searching Authority found multiple inventions in this international appli  |   |  |  |  |  |
| <ol> <li>As all required additional search fees were timely paid by the applicant, this searchable claims.</li> <li>As all searchable claims could be searched without effort justifying an additional payment of any additional fee.</li> <li>As only some of the required additional search fees were timely paid by the covers only those claims for which fees were paid, specifically claims Nos.</li> </ol> | tional fee, this Authority did not invite applicant, this international search report |  |  |  |  |
| 4. No required additional search fees were timely paid by the applicant. Conrestricted to the invention first mentioned in the claims; it is covered by claims on Protest  The additional search fees were accompanied by the applicant No protest accompanied the payment of additional search   | licant's protest.   |  |  |  |  |
|   | •   |  |  |  |  |